CLAIMS

What is claimed is

1. A method for providing a continuous store function for a digital multi-media input device, comprising:

continuously detecting a plurality of objects to let a multi-media detecting means continuously acquire a plurality of multi-media data;

continuously processing said multi-media data by a multi-media processing means, wherein said multi-media data are continuously transmitted from said multi-media detecting means to said multi-media processing means; and

storing processed said multi-media data in an external storing means and a buffering means, wherein the operation of both said external storing means and said buffering means are controlled by a storage controlling means, said multi-media data only are transmitted in said buffering means while said external storing means being unavailable to storage any said multi-media data which are transmitted from said multi-media processing means.

2. The method of claim 1, said digital multi-media input device is a digital camera.

3. The method of claim 1, wherein possible reasons which let said external storing means be unavailable to storage any said multi-media data comprising the quota of said external storing means is full, said external storing means being exchanged, and said external storing means is failed.

4. The method of claim 1, further comprising:

continuously storing partial said multi-media data which transmitted from said multi-media means only into said external storing means while said external storing means being available to store any recently inputted said multi-media data;

continuously storing partial said multi-media data which transmitted from said multi-media means only into said buffering means while said external storing means being unavailable to store any recently inputted said multi-media data; and

continuously storing partial said multi-media data which transmitted from said multi-media means only into said external storing means while said external storing means being available again to store any recently inputted said multi-media data, besides, all said multi-media data which are stored in said buffering means also are totally transmitted into said external storing means.

5. The method of claim 1, further comprising:

continuously storing partial said multi-media data which transmitted from said multi-media means into both said external storing means and said buffering means while said external storing means being available to store any recently inputted said multi-media data;

continuously storing partial said multi-media data which transmitted from said multi-media means only into said buffering means while said external storing means being unavailable to store any recently inputted said multi-media data; and

continuously storing partial said multi-media data which transmitted from said multi-media means into both said external storing means and said buffering means while said external storing means being available again to store any recently inputted said multi-media

data, besides, all said multi-media data which are stored in said buffering means during the period that said external storing means being unavailable to store any recently inputted said multi-media data also are totally transmitted into said external storing means.

6.   The method of claim 5, partial said multi-media data which transmitted from said multi-media means are synchronously stored into both said external storing means and said buffering means while said external storing means being available to store any recently inputted said multi-media data.

7.   The method of claim 6, after the quota of partial said multi-media data which are stored in said buffering means exceeds a predetermined quota, partial said multi-media data which are stored in said buffering means being removed to let recently transmitted partial said multi-media data from said multi-media processing means can be stored in said buffering means in accordance with the step of first-in and first-out.

8.   The method of claim 5, while said external storing means being available to store said multi-media data, said multi-media data which are transmitted from said multi-media processing means being directly transmitted into said buffering means and indirectly transmitted into said buffering means in sequence, wherein any said multi-media data which are stored in said buffering means and exceeds a predetermined quota are removed into said external storing means, in accordance with the step of first-in and first-out, to let recently transmitted partial said multi-media data from said multi-media processing means can be stored in said buffering means.

9.   A digital multi-media input device with continuous store function, comprising:

a multi-media detecting means for continuously detecting a plurality of objects to continuously acquire a plurality of multi-media data;

a multi-media processing means for continuously processing said multi-media data while said multi-media data being transmitted from said multi-media detecting means;

an external storing means for storing said multi-media data after said multi-media data are processed by said multi-media processing means;

a buffering means for storing said multi-media data after said multi-media data are processed by said multi-media processing means; and

a storage controlling means for controlling the operation of both said external storing means and said buffering means, so let said multi-media data be transmitted into both said external storing means and said buffering means while said external storing means being available to store recently transmitted said multi-media data, and to let said multi-0medai data only be transmitted into said buffering means while said external storing means being unavailable to store recently transmitted said multi-media data.

10.   The digital multi-media input device of claim 9, said digital multi-media input device being a digital camera.

11.   The digital multi-media input device of claim 9, said multi-media detecting means being chosen from the group consisting of

charger coupled device and optical lens.

12.   The digital multi-media input device of claim 9, said multi-media processing means being chosen from the group consisting of micro processor and application specific integrated circuits.

13.   The digital multi-media input device of claim 9, said external storing means being chosen from the group consisting of CompactFlash, SmartMedia, MultiMedia Card, Secure Digital, and MemoryStick 。

14.   The digital multi-media input device of claim 9, said buffering means being chosen from the group consisting of flash and dynamic random access memory.

15.   The digital multi-media input device of claim 9, possible reasons which let said external storing means be unavailable to storage any said multi-media data comprising the quota of said external storing means is full, said external storing means being exchanged, and said external storing means is failed.

16.   The digital multi-media input device of claim 9, the operating steps of said storage controlling means comprising:
        continuously storing partial said multi-media data which transmitted from said multi-media means only into said external storing means while said external storing means being available to store any recently inputted said multi-media data;
        continuously storing partial said multi-media data which transmitted from said multi-media means only into said buffering

means while said external storing means being unavailable to store any recently inputted said multi-media data; and

continuously storing partial said multi-media data which transmitted from said multi-media means only into said external storing means while said external storing means being available again to store any recently inputted said multi-media data, besides, all said multi-media data which are stored in said buffering means also are totally transmitted into said external storing means.

17. The digital multi-media input device of claim 9, comprising:

continuously storing partial said multi-media data which transmitted from said multi-media means into both said external storing means and said buffering means while said external storing means being available to store any recently inputted said multi-media data;

continuously storing partial said multi-media data which transmitted from said multi-media means only into said buffering means while said external storing means being unavailable to store any recently inputted said multi-media data; and

continuously storing partial said multi-media data which transmitted from said multi-media means into both said external storing means and said buffering means while said external storing means being available again to store any recently inputted said multi-media data, besides, all said multi-media data which are stored in said buffering means during the period that said external storing means being unavailable to store any recently inputted said multi-media data also are totally transmitted into said external storing means.

18. The digital multi-media input device of claim 17, the

operating steps of said storage controlling means let partial said multi-media data which transmitted from said multi-media means be synchronously stored into both said external storing means and said buffering means while said external storing means being available to store any recently inputted said multi-media data.

19. The digital multi-media device of claim 18, the operating steps of said storage controlling means let partial said multi-media data which are stored in said buffering means be removed to let recently transmitted partial said multi-media data from said multi-media processing means can be stored in said buffering means in accordance with the step of first-in and first-out after the quota of partial said multi-media data which are stored in said buffering means exceeding a predetermined quota.

20. The digital multi-media device of claim 17, the operating steps of said storage controlling means let said multi-media data which are transmitted from said multi-media processing means be directly transmitted into said buffering means and indirectly transmitted into said buffering means in sequence while said external storing means being available to store said multi-media data, wherein any said multi-media data which are stored in said buffering means and exceeds a predetermined quota are removed into said external storing means, in accordance with the step of first-in and first-out, to let recently transmitted partial said multi-media data from said multi-media processing means can be stored in said buffering means.